

NON-PUBLIC?: N  
ACCESSION #: 8903140533  
LICENSEE EVENT REPORT (LER)

FACILITY NAME: Salem Generating Station - Unit 1 PAGE: 1 of 3

DOCKET NUMBER: 05000272

TITLE: Rx. Trip - #14 S/G SF/FF Mismatch With Low S/G Level Due To Personnel Error

EVENT DATE: 02/06/89 LER #: 89-007-00 REPORT DATE: 03/02/89

OPERATING MODE: 1 POWER LEVEL: 100

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR  
SECTION  
50.73(a)(2)(iv)

LICENSEE CONTACT FOR THIS LER:

NAME: M. J. Pollack - LER Coordinator TELEPHONE: 609-339-4022

COMPONENT FAILURE DESCRIPTION:

CAUSE: B SYSTEM: SB COMPONENT: ZIS MANUFACTURER: N007  
REPORTABLE TO NPRDS: N

SUPPLEMENTAL REPORT EXPECTED: NO

ABSTRACT:

On February 6, 1989 at 1055 hours, during routine power operation, the Unit experienced a Reactor Trip on No. 14 Steam Generator (S/G) Low Level concurrent with Steam Flow/Feed Flow mismatch. At the time of the event, No. 14 S/G steam pressure channel I functional surveillance was in progress. The root cause of this event has been attributed to personnel error. Post trip data indicates that the Nuclear Control Operator (NCO) did not select the correct channel during performance of I&C procedure 1PD-2.6.060, "Channel Functional Test - 1PT-544 #14 Steam Generator Steam Pressure Protection Channel I". Pressure compensation for determining steam flow is eliminated when the channel test switch is placed in the test position as per procedure. This causes Steam Flow indication to drop radically causing a signal to initiate closure of the 14BF19 Feedwater Control Valve thereby decreasing feed flow. With the wrong channel apparently chosen as the controlling channel, the 14BF19 valve began closing. Once S/G level dropped to 25% the reactor trip occurred since the signal for Steam Flow/Feed Flow mismatch was procedurally previously actuated. This event has been reviewed by Operations management. Appropriate corrective disciplinary action has been taken. This

event will be reviewed by the Nuclear Training Center for incorporation into applicable training programs. Operations Department will review this event with applicable Operations Department personnel.

END OF ABSTRACT

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#### PLANT AND SYSTEM IDENTIFICATION:

Westinghouse - Pressurized Water Reactor

Energy Industry Identification System (EIIS) codes are identified in the text as xx

#### IDENTIFICATION OF OCCURRENCE:

Reactor Trip - No. 14 S/G Steam Flow/Feed Flow Mismatch With Low Steam Generator Level Due To Personnel Error

Event Date: 2/06/89

Report Date: 3/02/89

This report was initiated by Incident Report No. 89-084.

#### CONDITIONS PRIOR TO OCCURRENCE:

Mode 1 Reactor Power 100% - Unit Load 1155 MWe

#### DESCRIPTION OF OCCURRENCE:

On February 6, 1989 at 1055 hours, during routine power operation, the Unit experienced a Reactor Trip on No. 14 Steam Generator (S/G) Low Level concurrent with Steam Flow/Feed Flow mismatch. At the time of the event, No. 14 S/G steam pressure channel I functional surveillance was in progress.

The Unit was stabilized in Mode (hot Standby) and at 1153 hours, the same day, the Nuclear Regulatory Commission was notified of the automatic actuation of the Reactor Protection System JC in accordance with Code of Federal Regulations 10CFR 50.72(b)(2)(ii).

#### APPARENT CAUSE OF OCCURRENCE:

The root cause of this event has been attributed to personnel error.

Post trip data indicates that the Nuclear Control Operator (NCO) did not select channel II as the No. 14 S/G Steam Flow "Record and Control" channel as required by I&C procedure 1PD-2.6.060, "Channel Functional Test - 1PT-544 14 Steam Generator Steam Pressure Protection Channel I", reference procedure step 7.1. Channel I appears to have been selected. Pressure Compensation for determining steam flow is eliminated when the procedure step for placing the channel test switch in the test position is performed. This causes closure of the 14BF19 Feedwater Control Valve thereby decreasing feed flow. With the wrong channel apparently chosen as the controlling channel, the 14BF19 valve began closing. Once S/G level dropped to 25%, the reactor trip occurred since the signal for Steam Flow/Feed Flow mismatch was procedurally previously actuated.

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#### ANALYSIS OF OCCURRENCE:

The Steam Flow/Feed Flow Mismatch coincident with Low S/G Level reactor trip is anticipatory. Its function is to prevent a loss of heat sink capability by sensing conditions which would eventually result in a dry steam generator. By tripping the reactor prior to reaching the Low-Low Level trip setpoint, the required starting time and capacity requirements for the Auxiliary Feedwater System BA are reduced; thereby, minimizing the thermal transient on the S/Gs and the Reactor Coolant System AB .

The Reactor Protection System functioned as designed. However, Control Room indication of closure of the 14MS167 valve (Main Steam Isolation Valve) was not immediately received. Post trip investigation revealed that it did close within the required time frame.

This occurrence did not affect the health or safety of the public. Due to the automatic actuation of the Reactor Protection System, this event is reportable in accordance with Code of Federal Regulations 10CFR 50.73(a)(2)(iv).

#### CORRECTIVE ACTION:

This event has been reviewed by Operations management. Appropriate corrective disciplinary action has been taken.

This event will be reviewed by the Nuclear Training Center for incorporation into applicable training programs.

Operations Department will review this event with applicable Operations Department personnel.

Investigation of the 14MS167 Control Room indication problem has revealed that the "close" limit switch was not making proper contact. The switch was repaired and the valve was tested satisfactorily.

General Manager -  
Salem Operations

MJP:pc

SORC Mtg. 89-016

ATTACHMENT 1 TO 8903140533 PAGE 1 OF 1

PSE&G  
Public Service Electric and Gas Company P.O. Box E  
Hancocks Bridge, New Jersey 08038

Salem Generating Station

March 2, 1989

U. S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555

Dear Sir:

SALEM GENERATING STATION  
LICENSE NO. DPR-70

DOCKET NO. 50-272  
UNIT NO. 1  
LICENSEE EVENT REPORT 89-007-00

This Licensee Event Report is being submitted pursuant to the requirements of the Code of Federal Regulations 10CFR 50.73(a)(2)(iv). This report is required within thirty (30) days of discovery.

Sincerely yours,

L. K. Miller  
General Manager -  
Salem Operations

MJP:pc

Distribution

\*\*\* END OF DOCUMENT \*\*\*

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